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THE IDENTITY OF IRIS HOOKERI AND THE ASIAN I. SETOSA.

M. Foster.

[Editorial Note.—The discovery by Dr. G. G. Kennedy two years ago at Cutler, Maine, of the unique *Iris Hookeri*, Penny, formerly known only from the coast of eastern Canada, Labrador and Newfoundland, has drawn much attention to that handsome plant.[1] As a result of recent observations, the range of the species has been more clearly defined than heretofore, and we now know *I. Hookeri* on sea-beaches and headlands from Mallijak (Hamilton Inlet), Labrador, to the Baie des Chaleurs, New Brunswick, and up the St. Lawrence to Saguenay and Kamouraska Counties, Quebec; on Newfoundland, the Magdalen Islands, and Prince Edward Island; and from Sydney, Cape Breton, to Jonesport, Maine. With the attention of New England botanists so recently directed to this northern Iris, it was an especially happy chance which led Miss Mary A. Day, Librarian of the Gray Herbarium, to discover among some papers of the late Sereno Watson a manuscript note upon this plant from Sir Michael Foster, the distinguished secretary of the Royal Society and for twenty years Professor of Physiology at Trinity College, Cambridge. This note which its author permits us to publish was addressed to Dr. Watson shortly before his death.]

In an interesting note in Botanical Gazette, xii. p. 99, May, 1887, on "Our 'tripetalous' species of Iris," you shew that *I Hookeri* has priority as a name for the Canadian tripetalous species. I have several times received plants under the name "*I. tridentata*," clearly not specimens of Walter's plant [*I. tripetala*], but so identical in all respects with *I. setosa*, Pallas, that, though some of them were said to come from Canada, I thought there must have been some mistake, and that what I had received were simply specimens of the Asian *I. setosa*.

Two years ago, however, Mr. James Fletcher of the Agricultural Department, Ottawa, was so very kind as to send me ripe full capsules and living roots of the tripetalous Iris growing at Dalhousie,

[1] See Kennedy, Rhodora, iv. 24, and Collins, ibid, 179, t. 39.

New Brunswick. The capsule and seed were exactly like the capsule and seed of the Asian *I. setosa*. In your note you point out the features of the capsule of the Canadian Iris. I may add that the small dense seed, pyriform or oval except for the very conspicuous raphe, is most distinct. Not only is it wholly different from the wedge-shaped seed of *I. versicolor* (which in turn is almost identical with that of the European *I. pseudacorus*, the two plants being the New World and Old World forms of the same type) but so unlike the seed of other Irises known to me that I think I could always recognize it and detect it mixed with other seed. That of *I. ensata* comes nearest to it.

Mr. Fletcher's root flowered with me last summer (1889), and I must confess that I cannot see in it any specific differences from the Asian *Iris setosa*. The distinguishing feature of *I. setosa* is the diminished inner perianth-segment or standard, in which a very short narrow claw suddenly expands into a minute ala on each side, the two together not reaching the width of 1 cm., and then rapidly narrows to a bristle-like point, the whole segment being only about 1.5 or at most 2 cm. in length. In *I. versicolor*, the standards are sometimes small but never so small as this, and, moreover, they are always ovate or ovate-lanceolate.

The Canadian plant differs from what I may perhaps consider as the typical Asian plant, in the standard not narrowing rapidly to a point from the alae, but, after narrowing somewhat, maintaining the same width for a space and then suddenly becoming pointed; in the blade of the outer perianth-segment being more orbicular; in the claw of the same having a more pronounced flange at its base; in the white patch or "signal" at the junction of the claw and blade being less sharply defined, and in the ovary being more distinctly grooved on the sides. In all these features, however, except the first, seedlings of the Asian *I. setosa* vary a good deal. The inflorescence of the Canadian plant was not so full and the foliage not so luxuriant as those of a well grown Asian plant; but these, I take it, are merely matters of cultivation. The slight apparently permanent difference noted above, seems to be hardly enough to found a species upon. The Canadian plant is at most a variety and might be called *Iris setosa*, var. **canadensis**.

I may add that a plant said to come from Newfoundland, which my friend Mr. Max Leichtlin of Baden Baden gave me, appears to

be identical with Mr. Fletcher's plant. Both are much more like the Asian *Iris setosa* than a plant, which I also received from Mr. Leichtlin, which was said to come from Alaska, and which, though really an *I. setosa*, more fully perhaps deserves an independent name than does the Canadian form. Its deep rich purple flowers and tall habit make it a handsome plant.

It is interesting to observe that *Iris setosa*, like so many other of your North American plants of Asian origin, has been driven to your eastern seaboard, and nearly pushed out of the country. I can learn no evidence of its existence between Alaska on the west and East Canada. The *I. versicolor* of Canada appears to me wholly identical with the *I. versicolor* of the States but of less luxuriant growth.

SHELFORD, CAMBRIDGE, ENGLAND, January 11, 1890.

RECENTLY RECOGNIZED SPECIES OF CRATAEGUS IN EASTERN CANADA AND NEW ENGLAND,—IV.

C. S. SARGENT.

§ COCCINEAE.

* Anthers pale yellow.

CRATAEGUS COCCINEA, Linnaeus. Sargent, *Silva N. Am.* xiii. 133, t. 683.

The range of this species can now be extended along the coast of CONNECTICUT where it has been found by *Graves* near New London, by *Harger* at Oxford and Southbury, and by *Eames* at Stanford on the Hoosatonic River.

Crataegus Gravesii, n. sp. Leaves ovate to obovate, acute or rounded at the apex, narrowed from below the middle to the concave-cuneate or rarely rounded entire base, and slightly divided above the middle into 3 or 4 pairs of broad acute lobes; when they unfold tinged with red and coated above with silky white hairs and nearly fully grown when the flowers open and then membranaceous, light green and slightly hairy above with scattered pale hairs; at maturity thin but firm in texture, glabrous, dark green and lustrous on the upper surface, pale yellow-green on the lower surface, usually 3.5–4 cm. long and 2.5–3 cm. wide, with slender yellow midribs and 3 or 4